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Substitute for form 1449-A-TO

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Sheet

of

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Application Number	10/645,257
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10/645,257

<b>Filing Date</b>	<b>August 21, 2003</b>
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**August 21, 2003**

First Named Inventor	Su, et al.
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**Su, et al.**

**Art Unit**

2665 No 16

**Examiner Name**

Huy Day Vu N. JUNT/MA.

Attorney Docket Number	139137
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139137

## U. S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>o</sup>
		Country Code <sup>2</sup> Number <sup>3</sup> Kind Code <sup>5</sup> (if known)				
M	B	WO 00/78004 A3	12/21/2000	Alcatel Internetworking, Inc		

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-Substitute for form 1449B/PTO

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**Complete if Known**

Application Number

**10/645,257**

**Filing Date**

**August 21, 2003**

***First Named Inventor***

**Su, et al.**

### Art Unit

2665 2614

**Examiner Name**

**Huy Duy Vu**

**Attorney Docket Number**

139137

## NON PATENT LITERATURE DOCUMENTS

**Examiner  
Signature**

Date  
Considered

4/15/07

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet	1	of	4	Attorney Docket Number	1285-0124US
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Application Number	10/645257
Filing Date	August 21, 2003
First Named Inventor	Kailing James Su et al.
Art Unit	2616
Examiner Name	M JUNTIMA

**OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
NO		D. MORATO, J. ARACI, L.A. DIEZ, M. IZAL and E. MAGANA, "On Linear Prediction of Internet Traffic for Packet and Burst Switching Networks", Computer proceedings, Tenth International Conference on Communications and Networks, pp. 138-143, 2001. <u>15-17 October 2001</u>	
		J. YANG and M. DEVETSIKIOTIS, "On-Line Estimation, Network Design and Performance Analysis with Effective Bandwidths", In Proceedings of the International Teletraffic Congress, ITC-17, Salvador de Bahia, September 24-28, 2001, Brazil.	
		W. SHEN, "On-Line Measurement of Effective Bandwidth and a Hierarchical Self-Sizing Framework", Masters Thesis, Department of Systems and Computer Engineering, Carleton University, Ottawa, Ontario, Canada, April 15, 2002.	
		W. SHEN and M. DEVETSIKIOTIS, "On-line Estimation of Effective Bandwidth for Long Range Dependent Traffic", submitted to the Second IFIP-TC Networking Conference, Newtorking 2002, May 19-24, 2002, Pisa, Italy.	
		S.A.M. OSTRING and SIRISENA, "The Influence of Long Range Dependence on Traffic Prediction", ICC IEEE International Conference on Communications and Networks, 2001, pp. 1000-1005. <u>11-14 June 2001</u>	
		S. FLOYD and V. JACOBSON, "Random Early Detection Gateways for Congestion Avoidance", IEEE/ACM Trans. Net. vol. 1, no. 4, Aug. 1993, pp. 397-413.	
		S. ROONEY, J.E. VAN DER MERWE, S.A. CROSBY and I.M. LESLIE, "The Tempest: a Framework for Safe, Resource Assured, Programmable Networks", IEEE Communications Magazine, Oct. 1998, pp. 42-53.	
		H. SAITO and K. SHIOMOTO, "Dynamic Call Admission Control in ATM Networks", JSAC, Vol. 9, Sept. 1991, pp. 982-989.	
		S. TARTARELLI, M. FALKNER, M. DEVETSIKIOTIS, I. LAMBADARIS and S. GIORDANO, "Empirical Effective Bandwidth", In Proceedings of IEEE Globecom 2000, December 2000, San Francisco, pp. 672-678.	
NJ		R. GUERIN, H. AHMADI and M. NAGHSHINEH, "Equivalent Capacity and Its Application to Bandwidth Allocation in High-Speed Networks", IEEE Journal on Selected Areas in Communications, 9(7), Sept 1991, pp. 968-981.	

Examiner Signature		Date Considered	4/15/07
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<b>Substitute for form 1449/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/645257
		Filing Date	August 21, 2003
		First Named Inventor	Kailing James Su et al.
		Art Unit	2616
		Examiner Name	N. SUNTUMA
Sheet 2	of 4	Attorney Docket Number	1285-0124US

OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
NT		M. GROSSGLAUSER and D.N.C. TSE, "A framework for robust measurement-based admission control", IEEE/ACM Transactions on networking, Volume: 7, Issue: 3, June 1999, pp. 293-309.	
		S. SHENKER, "Fundamental Design Issues for the Future Internet", IEEE JSAC, Vol. 13 (7), September 1981, pp. 1176-1188.	
		Q. HAO and M. DEVETSIKIOTIS, "Self-sizing and Optimization of High-Speed Multiservice Networks", In Proceedings of IEEE Globecom 2000, December 2000, San Francisco, pp. 1818-1823.	
		S. ATHURALIYA, S.H. LOW, V.H. LI and Q. YIN, "REM: Active Queue Management", In IEEE Network, May/June 2001, pp. 48-53.	
		M. MONTGOMERY and G. DE VECIANA, "On the Relevance of Time Scales in Performance Oriented Traffic Characterizations", In Proc. of IEEE INFOCOM '96, April 1996, pp. 513-520.	
NT		S.A.M. OSTRING, H.R. SIRISENA and I. HUDSON, "Rate control of elastic connections competing with long range dependent network traffic", IEEE Transactions on Communications, Volume 49, issue: 6, June 2001, pp. 1092-1101.	
NT		R. CACERE et al., "Measurement and Analysis of IP Network Usage and Behavior", IEEE Communication Magazine, May 2000, pp. 144-151.	
NT		A MOHAMMED, E. JONES, H. OGIER, M.A. VOUK and Z. DWEKAT, "DiffServ Experiments: Analysis of the premium Service over the Alcatel-NCSU Internet2 Testbed", In Proc. of ECUMN '02, Colmar, France, April 2002, PP. 124-130.	
NT		C.V. HOLLOT, V. MISRA, D. TOWSLEY and W.B. GONG, "On Designing Improved Controllers for AQM Routers Supporting TCP Flows", Proc. IEEE INFOCOM, Apr. 2001, pp. 1726-1734.	
NT		L. BRESLAU, S. JAMIN and S. SHENKER, "Comments on the Performance of Measurement-based Admission control Algorithms", In Proc. IEEE INFOCOM, 2000, pp. 1233-1242. 26-30 March 2000	c.

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 3 of 4

Application Number	10/645287
Filing Date	August 21, 2003
First Named Inventor	Kailing James Su et al.
Art Unit	2616
Examiner Name	N. JUNTIMA
Attorney Docket Number	1285-0124US

**OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
MS		J.D. WETHERAL, J.V. GUTTAG and D.L. TENNENHOUSE, "ANTS: A Toolkit for Building and Dynamically Deploying Network Protocols", IEEE OPENARCH '98, San Francisco, CA, April 1999, pp. 117-129.	
		J. YAN, "Adaptive Configuration of Elastic High-Speed Multiclass Networks", In IEEE Communications Magazine, May 1998, pp. 116-120.	
		S. KI, S. PARK and D. ARIFLER, "SMAQ: A Measurement-Based Tool for Traffic modeling and Queuing Analysis Part 2: Network Applications", IEEE Communications Magazine, August 1998, pp. 66-70.	
		P. WANG, Y. YEMINI, D. FLORISSI and J. ZINKY, "A Distributed Resource Controller for QoS Applications", NOMS 2000-IEEE/IFIP Network Operations and Management Symposium, Honolulu, Hawaii, April 2000, pp. 143-156.	
		M. CHRISTIANSEN, K. JEFFAY, D. OTT and F.D. SMITH, "Tuning RED for Web Traffic", In Proc. IEEE/ACM Transactions on Networking, Vol. 9, No. 3, June 2001, pp. 249-264.	
		A. TERZIS, L. WANG, J. OGAWA and L. ZHANG, "A Two-tier Resource Management Model for the Internet", In Proc. of Global Internet: Application and Technology, Global Telecommunications Conference - Globecom '99, Dec. 1999, pp. 1779-1791.	
		IEEE P1520/TS/IP-001, "Proposed IEEE Standard for Application Programming Interfaces for Networks", <a href="http://www.ieee-pin.org">http://www.ieee-pin.org</a> , pp. 1-10.	
		Y. YEMINI and S. DE SILVA, "Towards Programmable Networks", IFIP/IEEE Intl. Workshop on Distributed Systems: Operations and Management, L'Aquila, Italy, April 15, 1996, pp. 1-11.	
		A. ODLYZKO, "Internet Pricing and History of Communications", Computer Networks, Vol. 36, No. 5-6, Revised version February 8, 2001, pp. 1-40.	
MS		E. KOHLER, R. MORRIS, B. CHEN, J. JANNOTTI and M.F. KAASHOEK, "The Click modular router", 17th ACM Symposium on Operating Systems Principles, Dec. 1999, Kiawah Island, SC, pp. 1-34.	

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		Application Number	10/645257
		Filing Date	August 21, 2003
		First Named Inventor	Kailing James Su et al.
		Art Unit	2614
		Examiner Name	NIJUNTIMA
Sheet 4	of 4	Attorney Docket Number	1285-0124US

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MS		S. KALYANAASUNDARAM, E.K.P. CHONG and N.B. SHROFF, "Optimal Resource Allocation in Multiclass Networks with User-Specified Utility Functions", In Proceedings of the International Teletraffic Congress, ITC-17, Salvador de Bahia, December 2001, Brazil, pp. 613-630.	
MS		G. KESIDIS, "Bandwidth Adjustments Using On-line Packet-level Measurements", In Proc. SPIE Conference on Performance and Control of Network Systems, Boston, Sept. 19-22, 1999.	
		R. KELLER, S. CHOI, M. DASEN, D. DECASPER, G. FANKHAUSER and B. PLATTNER, "An active router architecture for multicast video distribution", <a href="http://www.arl.wustl.edu/arl">http://www.arl.wustl.edu/arl</a> . 26-30 March 2000	
		S. HANDELMAN, S. STIBLER and N. BROWNEE, "RTFM: New Attributes for Traffic Flow Measurement", Network Working Group, RFC 2724, Oct. 1999, pp. 1-16.	
		A.T. CAMPBELL, I. KATZELA, K. MIKI and J. VICENTE, "Open Signaling for ATM, Internet and Mobile Networks", OPENSIG '98, Oct. 5-6, 1998: <a href="http://comet.columbia.edu/opensig/activities">http://comet.columbia.edu/opensig/activities</a> , pp. 1-17.	
		S. CHOI, D. DESCASPER, J. DEHART, R. KELLER, J. LOCKWOOD, J. TURNER and T. WOLF, "Design of a flexible open platform for high performance active networks", Proceedings of the Allerton Conference October 1999, <a href="http://www.arl.wustl.edu/arl">http://www.arl.wustl.edu/arl</a> .	
		A.T. CAMPBELL, A. ELEFThERiADIS and C. AURRECOECHEA, "End-to-end QoS management of Adaptive Flows", In IEEE Symposium of Multimedia Communications and Video Coding, New York, October 1995.	
MS		"Forwarding and Control Element Separation (forces)", ForCES working group: <a href="http://www.ietf.org">http://www.ietf.org</a> , pp. 1-3. 4-21-03	

Examiner Signature		Date Considered	4/15/07
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